U.S. ENVIRONMENTAL PROTECTION AGENCY
POLLUTION/SITUATION REPORT
Queen Street VOC - Removal Polrep

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region III

Subject: **POLREP #2**
Removal Site Evaluation
Queen Street VOC
A3YJ
Martinsburg, WV
Latitude: 39.4709920 Longitude: -77.9543280

To: Burns Fran, US EPA R3
Response Center RRC, EPA
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From: Michael Towle, On-Scene Coordinator
Date: 11/20/2015
Reporting Period: 5/13/2015 through 11/20/2015

1. Introduction

1.1 Background

Site Number:	A3YJ	**Contract Number:**	
D.O. Number:		**Action Memo Date:**	
Response Authority:	CERCLA	**Response Type:**	Time-Critical
Response Lead:	EPA	**Incident Category:**	Removal Assessment
NPL Status:	Non NPL	**Operable Unit:**	
Mobilization Date:	12/2/2014	**Start Date:**	11/9/2014
Demob Date:		**Completion Date:**	
CERCLIS ID:		**RCRIS ID:**	
ERNS No.:		**State Notification:**	
FPN#:		**Reimbursable Account #:**	

1.1.1 Incident Category

This Site relates to a suspected release of chlorinated organic contamination in the area of a public drinking water supply.

1.1.2 Site Description

The Site is near the location of a former leaking underground storage tank at a fuel station. After remediation of the leaking tank and following investigation, chlorinated organic (i.e., tetrachloroethylene) contamination was found in soil gas (ground water was not analyzed for the same contamination). The State of West Virginia requested EPA assistance in determining the source and extent of contamination

since a contamination in the vicinity of the Site would likely affect a public drinking water supply.
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1.1.2.1 Location

The Site is near the corner of North Queen Street and Lambert Street (now Cloud St.) in Martinsburg, Somerset Co., WV.

1.1.2.2 Description of Threat

The Queen Street VOC site (Site) is an unknown source of possible chlorinated volatile organic compound (VOC) contamination suspected to be located near the intersection of North Queen Street and Lambert Street (currently named as Cloud Street), in Martinsburg, WV. The Site was discovered during the course of a Leaking Underground Storage Tank (LUST) investigation (LUST No. 98-034) at a gasoline station located near the intersection of North Queen Street and Lambert Street. The Site is located in a commercial area which includes a gasoline station/convenience store and retail strip mall to the north; a vacant grass lot and vacant business to the east; a restaurant to the south; and a farm supply store to the west across North Queen Street. It is suspected that tetrachlorethylene (PCE) may be migrating to the ground water (from an unknown source) and threatening public drinking water supply.

1.1.3 Preliminary Removal Assessment/Removal Site Inspection Results

Two 12,000-gallon underground storage tanks (UST), originally installed in 1964, were removed and replaced with new upgraded USTs at a nearby gasoline station in 1998. Petroleum contamination and perched water were encountered during the UST removal process. Approximately 674 tons of contaminated soil and 7,000 gallons of water were removed during cleanup activities. As a result, a State regulatory investigation was initiated under WV Leaking UST No. 98-034. Investigative activities related to the LUST included removal of identified subsurface soil and groundwater contamination consisting of petroleum hydrocarbons, including gasoline range organics (GRO), benzene, toluene, ethylbenzene, xylenes (BTEX), and methyl tert-butyl ether (MTBE). Additionally, analysis of soil gas samples indicated the presence of tetrachloroethene (a.k.a., PCE) in two of three soil gas samples in addition to the common gasoline-related constituents. PCE, which is not a gasoline-related constituent, was detected in soil gas samples collected in front of the Site building at concentrations as high as 3,700 parts per billion volume (ppbv). Groundwater samples collected as part of the investigation had only been analyzed for gasoline-related constituents and had not been analyzed for PCE or other chlorinated solvents. The report prepared for the investigation indicated that groundwater at the Site flows generally to the west, northwest.

The Site is located in a Wellhead Protection Area. A Water Plant is located approximately 0.75 mile southwest of the Site and a public water source is located approximately 1.5 miles west of the Site.

Surface runoff from the area drains to the northwest, west, and southwest. A grass-covered storm water swale is located approximately 200 feet (ft.) west of the Site, across North Queen Street. The swale drains westward to a drain pipe that extends under the farm supply store parking area, and is believed to eventually empty into Dry Run at a location approximately 1,000 ft. southwest of the Site.

Previous investigations in the area have reported that bedrock is encountered at depths ranging from 5 to 12 ft. below ground surface (bgs). Boring logs for boreholes made during installation of monitoring wells (MWs) in 2010 depict void spaces at 11 to 12 ft. bgs (in MW-11) and at 10 to 14 ft. bgs (in MW-13). The boring log for another monitoring well (MW-12) indicated the presence of multiple clay-filled voids from near the surface to 29 ft. bgs. Depths to groundwater were reported to range between 7 and 20 ft. below tops of casings in the monitoring wells. Groundwater flow direction was reported as generally to the northwest. Consultants for the property owner surmised that contaminated groundwater from the Site had migrated off site through fractures in the bedrock.

In November 2014 EPA initiated a removal site evaluation at the Site focusing on sampling of some of the existing ground water monitoring wells for VOCs. Validated analytical results indicated low level detections of several gasoline-related VOC constituents and other contaminants. However, no detection of Tetrachloroethylene was found in the ground water.

2. Current Activities

2.1 Operations Section

2.1.1 Narrative

A removal site evaluation was begun in November 2014. EPA and its contractor arranged to sample some of the existing ground water monitoring wells on the Site to determine if PCE was entering the ground water and possibly migrating towards drinking water sources. EPA found many of the existing wells were not accessible due to the type of cover atop the well - EPA was unable to remove the cover without risk of breakage. As such, the OSC directed that only the accessible wells be sampled to provide a quick indication of whether or not the ground water was contaminated. After development of a sampling plan, obtaining access to the property, and procuring laboratory space, an onsite sampling event was conducted in December 2014. No tetrachloroethylene, the contaminant of concern, was found in the sampled wells.

2.1.2 Response Actions to Date

A. During a Site visit in November 2014, the EPA START contractor found twelve of the thirteen monitoring wells reported to be at the Site. Many of the wells could not be accessed due to a special five-sided bolt that was used to secure the well covers. Six of the wells were however found to be accessible (MW-2, MW-6, MW-7, MW-11, MW-12, and MW-13). Two of the accessible wells had a broken or missing well cover (MW-6 and MW-11) and two of the wells located on the west side of North Queen Street had cracked/damaged well pads (MW-12, MW-7). None of the wells had locks installed on the well caps.

B. The OSC directed START to sample accessible monitoring wells to determine if groundwater had been impacted by non-petroleum related contaminants, specifically tetrachloroethylene (PCE) and/or its breakdown products.

C. On December 2, 2014, the accessible wells were sampled. The results indicated very low concentrations of some constituents likely relating to petroleum products, but no obvious evidence of PCE or its breakdown products. PCE is determined the contaminant of concern for the removal site evaluation due to its detection in soil gas samples previously collected at the Site.

D. The OSC forwarded the analytical results to the State of West Virginia and evaluated those results with the State. The OSC and WVDEP discussed the results and agreed that additional sampling would be needed to verify that a currently unknown source of PCE is not affecting the ground water. The flow of ground water on the Site could have allowed PCE to move in a direction in which an accessible well was not specifically located. Additionally, the source and magnitude of PCE in the soil is unknown. The OSC agreed to continue removal site evaluation and sample ground water at the point most suspected to be contaminated (i.e., closest to the source of PCE known to exist in the soil as measured by soil gas analysis).

E. The EPA START contractor obtained a tool necessary to gain access to the previously inaccessible wells. It was then determined that the old wells were in very poor condition - the bolts were easily sheared in the removal of the well cover.

F. The OSC directed sampling of the existing wells closest to the point of PCE previously detected in the soil gas. This would include existing well MW-1. The OSC also directed sampling and analysis of soil gas in 1) existing soil gas monitoring points and 2) within two new points to be installed in the area most suspected to be a potential source of the PCE contamination. The OSC believes that such assessment will enable an evaluation of whether soils at the Site are contaminating the ground water or if a source of PCE near the Site could be contaminating ground water.

G. The EPA START contractor prepared a Sampling Plan and the sampling event is scheduled for December 2015.

2.1.3 Enforcement Activities, Identity of Potentially Responsible Parties (PRPs)

There is no activity to identify a PRP since no contamination is found and the owner of the property is known.

2.1.4 Progress Metrics

Waste Stream	*Medium*	*Quantity*	*Manifest #*	*Treatment*	*Disposal*

2.2 Planning Section

2.2.1 Anticipated Activities

Coordinate with the State of West Virginia regarding the completion of the removal site evaluation.

2.2.1.1 Planned Response Activities

None.

2.2.1.2 Next Steps

Coordinate with the State and conclude the removal site evaluation**.**

2.2.2 Issues

2.3 Logistics Section

No information available at this time.

2.4 Finance Section

2.4.1 Narrative

the work is conducted under the START contract (Techlaw, inc.) under 2 separate TDDs:

1) 14-10-001 (closed)

2) 15-10-004

2.5 Other Command Staff

No information available at this time.

3. Participating Entities

No information available at this time.

4. Personnel On Site

No information available at this time.

5. Definition of Terms

No information available at this time.

6. Additional sources of information

No information available at this time.

7. Situational Reference Materials

No information available at this time.